

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A method of dynamically allocating available audio still video (ASV) buffer memory space in an ASV buffer for a current pack in a DVD audio bitstream, comprising:
 - (a) determining a pack type of the current pack;
 - (b) updating an ASV table with a pointer corresponding to an available memory location in the ASV buffer memory space, where the updating comprises:
incrementing a current pack counter;
computing a next ASV memory write address based upon the incremented pack counter; and
determining a next pack type based upon the current pack type; and
 - (c) concurrently with the updating, storing a current payload associated with the current pack to the available memory location.
2. (original) The method as recited in claim 1, further comprising:
when the current pack is not a last pack in the bitstream, then
repeating (a)-(c) for a next pack in the bitstream.
3. (currently amended) ~~A~~ The method as recited in claim 1, wherein the pack type is selected from a group comprising: a highlight pack, a subpicture pack, a video pack, and a pgm_end pack.
4. (canceled).
5. (currently amended) The method as recited in claim 4 1, wherein the determining a next pack type comprises:
if the current pack type is the pgm_end pack type, then
updating an ASV counter; and
updating a highlight pack buffer counter.

6. (currently amended) The method as recited in claim 4 1, wherein the determining a next pack type comprises:

if the current pack type is the highlight pack type, then
updating a subpicture buffer; and
updating a video buffer.

7. (currently amended) The method as recited in claim 4 1, wherein the determining a next pack type comprises:

if the current pack type is the subpicture pack type, then
updating a video buffer counter.

8. (original) The method as recited in claim 1, where in the ASV memory buffer is a SDRAM memory.

9. (original) The method as recited in claim 1, wherein the ASV buffer is included in a universal DVD-A/V player unit.

10. (original) The method as recited in claim 9, further comprising:

(v) defining an ASV frame;
(x) retrieving the ASV frame; and
(y) displaying the ASV frame on a display coupled to the DVD-A/V player unit.

11. (currently amended) A method as recited in claim 10, of dynamically allocating available audio still video (ASV) buffer memory space in an ASV buffer for a current pack in a DVD audio bitstream, wherein the ASV buffer is included in a universal DVD-A/V player unit, the method comprising:

determining a pack type of the current pack;
updating an ASV table with a pointer corresponding to an available memory location in the ASV buffer memory space;
concurrently with the updating, storing a current payload associated with the current pack to the available memory location;
defining an ASV frame;
retrieving the ASV frame; and

- displaying the ASV frame on a display coupled to the DVD-A/V player unit;
wherein the defining comprises:
- locating an ASV frame highlight pack, wherein the ASV frame highlight pack corresponds to a first memory space address in the ASV buffer corresponding to the ASV frame;
- locating an ASV frame pgm_end pack, wherein the ASV frame pgm_end pack corresponds to a second memory space address in the ASV buffer corresponding to the ASV frame, wherein the first and the second memory space addresses define a portion of the ASV buffer memory space allocated to the ASV frame.
12. (currently amended) ~~A~~ The method as recited in claim 11, wherein the locating an ASV frame highlight pack is based upon a first highlight pack pointer stored in the ASV table.
13. (currently amended) ~~A~~ The method as recited in claim ~~12~~ 11, wherein the locating an ASV frame pgm_end pack is based upon a first pgm_end pack pointer stored in the ASV table.
14. (original) A method of dynamically allocating available audio still video (ASV) buffer memory space in an ASV buffer for a current pack in a DVD audio bitstream, comprising:
- (a) determining a pack type of the current pack;
 - (b) updating an ASV table with a pointer corresponding to an available memory location in the ASV buffer memory space;
 - (c) concurrently with the updating, storing a current payload associated with the current pack to the available memory location;
 - (d) incrementing a pack counter;
 - (e) computing a next ASV memory write address based upon the incremented pack counter;
 - (f) determining a next pack type based upon the current pack type; and
 - (g) repeating (a)-(f) for a next pack in the bitstream when the current pack is not a last pack in the bitstream.
15. (currently amended) The method as recited in claim 14, wherein the pack type is selected from a group comprising: a highlight pack, a subpicture pack, a video pack, and a pgm_end pack.

16. (original) The method as recited in claim 15, wherein the determining a next pack type comprises:

if the current pack type is the pgm-end pack type, then
updating an ASV counter;
updating a highlight pack buffer counter;
if the current pack type is the highlight pack type, then
updating a subpicture buffer;
updating a video buffer; and
if the current pack type is the subpicture pack type, then
updating a video buffer counter.

17. (original) The method as recited in claim 14, where in the ASV memory buffer is a SDRAM memory.

18. (original) The method as recited in claim 14, wherein the ASV buffer is included in a universal DVD-A/V player unit.

19. (original) The method as recited in claim 18, further comprising:

defining an ASV frame;
retrieving the ASV frame; and
displaying the ASV frame on a display coupled to the DVD-A/V player unit.

20. (currently amended) ~~A~~ The method as recited in claim 19, wherein the defining comprises:

locating an ASV frame highlight pack, wherein the ASV frame highlight pack corresponds to a first memory space address in the ASV buffer corresponding to the ASV frame;
locating an ASV frame pgm~end pack, wherein the ASV frame pgm_end pack corresponds to a second memory space address in the ASV buffer corresponding to the ASV frame, wherein the first and the second memory space addresses define a portion of the ASV buffer memory space allocated to the ASV frame.

21. (currently amended) ~~A~~ The method as recited in claim 20, wherein the locating an ASV frame highlight pack is based upon a first highlight pack pointer stored in the ASV table.
22. (currently amended) ~~A~~ The method as recited in claim 21, wherein the locating an ASV frame pgm_end pack is based upon a first pgm_end pack pointer stored in the ASV table.
23. (original) An apparatus for dynamically allocating available audio still video (ASV) buffer memory space in an ASV buffer for a current pack in a DVD audio bitstream, comprising:
 - a means for determining a pack type of the current pack;
 - a means for updating an ASV table with a pointer corresponding to an available memory location in the ASV buffer memory space;
 - a means for concurrently with the updating, storing a current payload associated with the current pack to the available memory location;
 - a means for incrementing a pack counter;
 - a means for computing a next ASV memory write address based upon the incremented pack counter;
 - a means for determining a next pack type based upon the current pack type.
24. (original) The apparatus as recited in claim 23, wherein the pack type is selected from a group comprising: a highlight pack, a subpicture pack, a video pack, and a pgm_end pack.
25. (original) The apparatus as recited in claim 24, further comprising:
 - a means for updating an ASV counter;
 - a means for updating a highlight pack buffer counter;
 - a means for updating a subpicture buffer;
 - a means for updating a video buffer; and
 - a means for updating a video buffer counter.
26. (original) The apparatus as recited in claim 23, wherein the ASV buffer is included in a universal DVD-A/V player unit.
27. (original) The apparatus as recited in claim 26, further comprising:
 - a means for defining an ASV frame;

a means for retrieving the ASV frame; and
a means for displaying the ASV frame on a display coupled to the DVD-A/V player unit.

28. (original) The apparatus as recited in claim 27, wherein the defining comprises:
a means for locating an ASV frame highlight pack, wherein the ASV frame highlight pack corresponds to a first memory space address in the ASV buffer corresponding to the ASV frame;
a means for locating an ASV frame pgm_end pack, wherein the ASV frame pgm_end pack corresponds to a second memory space address in the ASV buffer corresponding to the ASV frame, wherein the first and the second memory space addresses define a portion of the ASV buffer memory space allocated to the ASV frame.
29. (currently amended) A computer program product system for dynamically allocating available audio still video (ASV) buffer memory space in an ASV buffer for a current pack in a DVD audio bitstream, comprising:
a computer;
a computer program executing on the computer, wherein the computer program
comprises computer instructions for:
~~computer code for determining a pack type of the current pack;~~
~~computer code for updating an ASV table with a pointer corresponding to an available memory location in the ASV buffer memory space;~~
~~computer code for concurrently with the updating, storing a current payload associated with the current pack to the available memory location;~~
~~computer code for incrementing a pack counter;~~
~~computer code for computing a next ASV memory write address based upon the incremented pack counter; and~~
~~computer code for determining a next pack type based upon the current pack type; and~~
~~a computer readable medium for storing the computer program product.~~
30. (currently amended) The computer program product system as recited in claim 29, wherein the pack type is selected from a group comprising: a highlight pack, a subpicture pack, a video pack, and a pgm_end pack.

31. (currently amended) The computer program product system as recited in claim 30, wherein the computer program further comprising comprises computer instructions for:

computer code for updating an ASV counter;
computer code for updating a highlight pack buffer counter;
computer code for updating a subpicture buffer;
computer code for updating a video buffer; and
computer code for updating a video buffer counter.

32. (currently amended) The computer program product system as recited in claim 29, where in the ASV memory buffer is a SDRAM memory.

33. (currently amended) The computer program product system as recited in claim 29, wherein the ASV buffer is included in a universal DVD-A/V player unit.

34. (currently amended) The computer program product system as recited in claim 33, wherein the computer program further comprising comprises computer instructions for:

computer code for defining an ASV frame;
computer code for retrieving the ASV frame; and
computer code for displaying the ASV frame on a display coupled to the DVD-A/V player unit.

35. (currently amended) A The computer program product system as recited in claim 34, wherein the computer program further comprising comprises computer instructions for:

computer code for locating an ASV frame highlight pack, wherein the ASV frame highlight pack corresponds to a first memory space address in the ASV buffer corresponding to the ASV frame; and
computer code for locating an ASV frame pgm_end pack, wherein the ASV frame pgm_end pack corresponds to a second memory space address in the ASV buffer corresponding to the ASV frame, wherein the first and the second memory space addresses define a portion of the ASV buffer memory space allocated to the ASV frame.